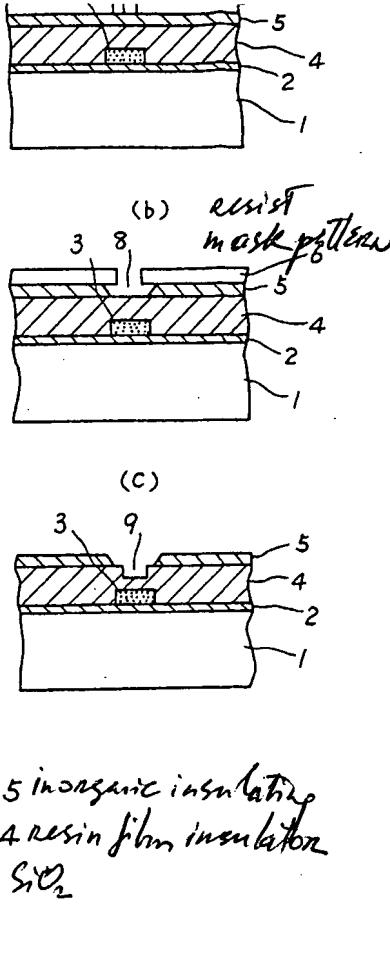


PAT-NO: JP361171151A  
 DOCUMENT-IDENTIFIER: JP 61171151 A  
 TITLE: MANUFACTURE OF MULTILAYER WIRING  
 PUBN-DATE: August 1, 1986

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#### ABSTRACT:

PURPOSE: To contrive to improve the adhesion of the upper wiring layer by reducing the height of the columnar part of a through-hole aperture, by a method wherein the second insulation film is formed taperingly; then, a through-hole having steps is formed in the first insulation film by anisotropic dry etching.

CONSTITUTION: An Si dioxide film 2, the first layer wiring 3, and a thermosetting resin film 4 are formed on a semiconductor substrate 2. A hole 7 for through-hole formation is formed via inorganic insulation film 5 and resist 6, and a tapered hole 8 is formed by isotropic wet etching. Next, the insulation film 4 is anisotropically dry -etched; at this time, the resist pattern 6 is etched and disappears on account of the use of oxygen gas. Besides, because of strong anisotropy, etching vertically advances into a shape like a hole 9. Further, when a reactive ion etching with oxygen is used with the mask of the insulation film 5. The insulation film 4 is vertically etched into a through-hole 10 having steps.

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